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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,540	01/11/2002	John William Richardson	PU 020013	7304

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EXAMINER
JEAN GILLES, JUDE

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/02/2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This Action is in regards to the Reply received on 12/02/2005.

Response to Amendment

1.   This action is responsive to the application filed on 12/02/2005. No claim has

been amended. There are no newly added claims. Claims 1-19 are pending. Claims 1-

19 represent a method and apparatus for a " Physical Layer recovery in a streaming

data delivery system."

Response to Arguments

2.   Applicant's arguments with respect to claims 1-19 have been carefully

considered, but are not deemed fully persuasive. Applicant's arguments are deemed

moot in view of the following new ground of rejection as explained here below,

necessitated by response to the second non-final Office action.

The dependent claims stand rejected as articulated in the First Office Action and all

objections not addressed in Applicant's response are herein reiterated.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   **Claims 1-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over in

Li et al (Li), U.S. Patent No. 6,757,248 B1 view of Wang et al (Wang), U.S. Patent No.

6,901,048 B1.

Regarding **claim 1**, Li discloses the invention substantially as claimed. Although

Li teaches an asynchronous transfer mode (ATM) digital document delivery system,

comprising:

a customer premise unit configured to permit a customer to order and receive a

data stream (column 9, lines 53-67; column 15, lines 45-67);

a buffer coupled to the customer premise unit to store the data stream before

transmitting the data stream to a customer (column 14, lines 36-53; fig. 7, item Buffer2;

column 16, lines 40-65);

a server having digital documents stored thereon for delivery to the customer

through a switched ATM network (fig. 7, item 310; column 16, lines 40-65; fig. 6, items

400); however, Li does not specifically disclose "means for controlling a data rate of the

data stream between the server and the buffer to ensure maintenance of a steady data

stream from the customer premise unit to the customer during a loss of a physical layer

between the server and the customer premise unit.

In the same field of endeavor, Wang discloses a (... *At STEP 420, a failure of the*

physical layer (e.g., electrical optical) or logical layer (e.g., SONET STS or ATM VPC/VCC)

protected link is detected and at STEP 430, the nodes at either end of the failed but protected

link establish a "tunnel" between each other along the p-cycle associated with the failed

link. A "tunnel" is a physical, logical or virtual datagram conduit established along the

p-cycle and having end points which correspond to the nodes located at either end of the failed link.... Step 512: (46) The node does not react until a datagram is received at the node or is generated by the node. For example, a datagram could be received from an adjacent node or it could be produced as the result of a packetization operation performed by circuitry or software within the node which accepts user data from customer premises equipment...) [see Wang, column 10, lines 15-53; column 11, lines 35-42].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Wang's teachings of a method to ensure maintenance of a steady data stream from the customer premise unit to the customer during a loss of a physical layer between the server and the customer premise unit with the teachings of Li, for the purpose of providing a protection switching mechanism that is sufficiently fast to prevent the loss of high-priority traffic ordinarily traveling through one or more failed links, without unpredictably overloading the remaining links during a protection mode" as stated by Wang in lines 47-51 of column 2. By this rationale **claim 1** is rejected.

Regarding claim 2: the combination Li-Wang teaches the document delivery system, as recited in claim 1, wherein the customer premise unit includes the buffer therein, the buffer including a memory storage capacity sufficient to maintain the data stream to a customer for an amount of time (see Li; fig. 7, item 320; Router2; column 16, lines 20-67).

Regarding claim 3: Li teaches the document delivery system, as recited in

claim 2, wherein the amount of time includes time needed to restore the physical [*see*

Wang, column 10, lines 15-53; column 11, lines 35-42].

Regarding claim 4: Li teaches the document delivery system, as recited in claim

2, wherein the amount of time includes up to 30 seconds (see Li; column 16, lines 20-

67; Note that using a time limit for recovery is a well known feature in the art).

Regarding claim 5: Li teaches the document delivery system, as recited in claim

1, wherein the means for controlling includes a network control system coupled to the

server and the customer premise unit, the network control system providing control for

the data rate of the data stream to the customer premise unit from the server (see Li;

column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

Regarding claim 6: Li teaches the document delivery system, as recited in

claim 5, further comprising a multiplexer coupled between the customer premise unit

and the network control system, the multiplexer including a signaling mechanism to

alert at least one component that the physical layer is lost [*see Wang, column 10, lines*

15-53; column 11, lines 35-42].

Regarding claim 7: Li teaches the document delivery system, as recited in claim

6, further comprising virtual circuits set up between the network control system, the

customer premise unit and the multiplexer to enable communication therebetween (see

Li; fig. 6, items 400, access mux).

Regarding claim 8: Li teaches the document delivery system, as recited in

claim 1, wherein the server is configured to deliver the data stream at a rate greater

than a normal rate after the physical layer has been restored [*see Wang, column 10, lines 15-53; column 11, lines 35-42*].

Regarding claim 9: Li teaches the document delivery system, as recited in claim 8, wherein the server is configured to deliver the data stream at the normal rate after the buffer has been filled (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

Regarding claim 10: Li teaches the document delivery system, as recited in claim 1, wherein the customer premise unit is configured to deliver the data stream at a rate less than a normal rate when the physical layer is lost [*see Wang, column 10, lines 15-53; column 11, lines 35-42*].

Regarding claim 11: Li teaches a method for maintaining a data stream over an asynchronous transfer mode (ATM) network, comprising the steps of:

providing a customer premise unit configured to permit a customer to receive a data stream; storing a portion of the data stream in a buffer before transmitting the data stream to a customer(see Li; column 9, lines 53-67; column 15, lines 45-67);

transmitting the data stream from a server through a switched ATM network (see Li; column 14, lines 36-53; fig. 7, item Buffer2; column 16, lines 40-65); and

controlling a data rate of the data stream between the server and the buffer to ensure maintenance of a steady data stream from the customer premise unit to a customer during a loss of a physical layer between the server and the customer premise unit [*see Wang, column 10, lines 15-53; column 11, lines 35-42*].

Regarding claim 12: Li teaches the method as recited in claim 11, wherein the

step of controlling a data rate of the data stream includes maintaining an amount of data

from the data stream in the buffer to continue data flow to a customer for an amount of

time after the loss of the physical layer (see Li; column 15, lines 46-67; fig. 6, item FR+

installed in item 310).

Regarding claim 13: Li teaches the method as recited in claim 12, wherein the

amount of time includes time needed to restore the physical layer (see Li; column 15,

lines 46-67; fig. 6, item FR+ installed in item 310).

Regarding claim 14: Li teaches the method as recited in claim 11, wherein the

step of controlling includes employing a network control system coupled to the server

and the customer premise unit, the network control system providing control for the data

rate of the data stream to the customer premise unit from the server (see Li; column 15,

lines 46-67; fig. 6, item FR+ installed in item 310).

Regarding claim 15: Li teaches the method as recited in claim 14, further

comprising a multiplexer coupled between the customer premise unit and the network

control system, and further comprising the step of: when the physical layer is lost,

signaling from the multiplexer to alert at least one component that the physical layer is

lost [*see Wang, column 10, lines 15-53; column 11, lines 35-42*].

Regarding claim 16: Li teaches the method as recited in claim 14, further

comprising the step of setting up virtual circuits between the network control system, the

customer premise unit and the multiplexer to enable communication therebetween (fig.

6, items 400, access mux).

     Regarding claim 17: Li teaches the method as recited in claim 11, further comprising the step of delivering the data stream from the server at a rate greater than a normal rate after the physical layer has been restored (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

     Regarding claim 18: Li teaches the method as recited in claim 17, further comprising the step of delivering the data stream at the normal rate after the buffer has been filled (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

     Regarding claim 19: Li teaches the method as recited in claim 11, further comprising the step of delivering the data stream from the customer premise unit to a customer at a rate less than a normal rate when the physical layer is lost [*see Wang, column 10, lines 15-53; column 11, lines 35-42*].

Response to Arguments

5.   Applicant's Request for Reconsideration filed on 12/02/2005 has been carefully considered but is not deemed fully persuasive. However, because there exists the likelihood of future presentation of this argument, the Examiner thinks that it is prudent to address Applicants' main points of contention and that the Li patent fails to disclose or suggest, and is not all related to, a loss of physical layer and is triggered by data packet loss.

     It is the position of the Examiner that Li teaches the limitations of the above mentioned claims exept that it does not disclose the details of a loss of physical layer.

However, in view of Applicant's remarks, new reference of Wang is used in combination with Li to show the prima facie obviousness of this invention [see rejection of claim 1].

Conclusion

6.   **THIS ACTION IS MADE NON-FINAL.** Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-9000.
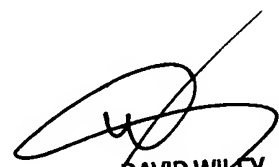
Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

February 18, 2006

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